

Monitoring Data Record

Project Title: R-2719A Crescent Road COE Action ID: 200802460  
 WQC Number: 003763  
 Stream Name: UT to Falling Creek  
 City, County and other Location Information: UT to Falling Creek is located on US 70 just west of the C.F. Harvey Parkway interchange in Kinston, Lenoir Co.  
 Date Construction Completed: 3/3/11 Monitoring Year: ( 5 ) of 5  
 Ecoregion: Southeastern Floodplains and Low Terraces 8 digit HUC unit 03020202  
 USGS Quad Name and Coordinates: 35.261881, -77.683669  
**Rosgen Classification:** E5  
 Length of Project: 2,393' Urban or Rural: Rural Watershed Size: 0.5 sq. miles  
 Monitoring DATA collected by: M. Green, N. Shah, B. Bradley  
 Date: 6/28/16  
 Applicant Information:  
 Name: NCDOT Roadside Environmental Unit  
 Address: 1425 Rock Quarry Road Raleigh, NC 27610  
 Telephone Number: (919) 861-3772 Email address: mlgreen@ncdot.gov  
 Consultant Information:  
 Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Telephone Number: \_\_\_\_\_ Email address: \_\_\_\_\_  
**Project Status:** Complete

**Monitoring Level required by COE and DWR (404 permit/ 401 Cert.):** Level 1 ~~2~~ ~~3~~

Monitoring Level 1 requires completion of *Section 1, Section 2 and Section 3*

**Permit States:** Monitoring of the stream restoration areas shall consist of Level 1 monitoring requirements. Monitoring shall be performed twice annually (summer and winter) for each year of a five year period following completion of the work. Monitoring activities shall consist of reference photos, plant survival determinations, and visual inspection of stream stability. The sites shall be monitored for five years, provided at least two bankfull events have occurred during this monitoring period. If two bankfull events have not occurred by the end of the five year monitoring period, the NCDOT may, at the DWR's discretion, cease further monitoring of the site. The two bankfull events should occur within different monitoring years.

The permittee shall monitor the onsite buffer mitigation site. Monitoring shall consist of visual review and photo evidence. An annual report shall be submitted to the DWR for a period of five years showing monitoring results, survival rate/success of tree and vegetation establishment, and that diffuse flow through the riparian buffer has been maintained. The first annual report shall be submitted within one year of final planting. Failure to achieve a buffer density of 320 trees per acre after five years will require the annual report to provide appropriate remedial actions to be implemented and a schedule for implementation. Approval of the final annual report and a formal "close out" of the mitigation site by the DWR is required.

#### Section 1. PHOTO REFERENCE SITES

*(Monitoring at all levels must complete this section)*

**Total number of reference photo locations at this site:**

**12 photos were taken from 6 photo point locations along the channel and 2 overview photos were taken of the site**

**Dates reference photos have been taken at this site:** 1/31/12, 7/20/12, 1/29/13, 7/11/13, 1/14/14, 6/26/14, 1/23/15, 6/10/15, 1/12/16, 6/28/16

**Individual from whom additional photos can be obtained (name, address, phone):** \_\_\_\_\_

**Other Information relative to site photo reference:** A site map with vegetation plot and photo point locations is included with this report.

**Attach plan sheet indicating reference photos.**

Estimated causes, and proposed/required remedial action: \_\_\_\_\_

Year 5 plant survival showed that 556 trees per acre were surviving. Silky dogwood, elderberry, and black willow were noted along the streambank. Other vegetation noted onsite included soft rush, red maple, broomsedge, pine, baccharis, cattail, woolgrass, morning glory, *Scirpus* sp., sweetgum, briars, tear-thumb, wax myrtle, lespedeza, and various grasses. NCDOT proposes to discontinue monitoring plant survival at the UT to Falling Creek stream mitigation site.

Plot #	River Birch	Green Ash	Overcup Oak	Swamp Chestnut Oak	Baldcypress	Sycamore	Total (Year 5)	Total (at planting)	Density (Tree/Acre)
1	22	5	3		2		32	37	588
2	14	8	3	1	3		29	41	481
3	6	21	5	1	3		36	41	597
4	16	9	12		3	1	41	50	558
Year 5 Average Density									556
Year 4 Average Density									516
Year 3 Average Density									498
Year 2 Average Density									537
Year 1 Average Density									625



### Section 3. CHANNEL STABILITY

**Visual Inspection:** The entire stream project as well as each in-stream structure and bank stabilization/revetment structure must be evaluated and problems addressed.

Report on the visual inspection of channel stability. Physical measurements of channel stability/morphology will not be required. Include a discussion of any deviations from as-built and an evaluation of the significance of these deviations and whether they are indicative of a stabilizing or destabilizing situation.

UT to Falling Creek is stabilized for the Year 5 Summer evaluation. Bankfull determinations are being recorded by a surface gauge located along the streambank. See the weblink for UT to Falling Creek gauges to see a graph of bankfull events. NCDOT proposes to discontinue monitoring channel stability at the UT to Falling Creek stream mitigation site.

Date	Station Number	Station Number	Station Number	Station Number	Station Number
Structure Type					
Is water piping through or around structure?					
Head cut or down cut present?					
Bank or scour erosion present?					
Other problems noted?					

### Section 4. DEBIT LEDGER

The entire 2,393 linear feet of UT to Falling Creek stream mitigation site was used for the R-2719A project to compensate for unavoidable stream impacts at a 1:1 ratio.



# UT to Falling Creek



Photo Point #1 (Upstream)



Photo Point #1 (Downstream)



Photo Point #2 (Upstream)



Photo Point #2 (Downstream)



Photo Point #3 (Upstream)



Photo Point #3 (Downstream)



# UT to Falling Creek



Photo Point #4 (Upstream)



Photo Point #4 (Downstream)



Photo Point #5 (Upstream)



Photo Point #5 (Downstream)



Photo Point #6 (Upstream)



Photo Point #6 (Downstream)



# UT to Falling Creek



Overview photo looking upstream from US 70

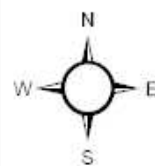
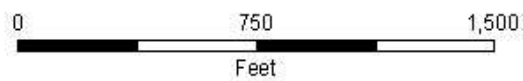


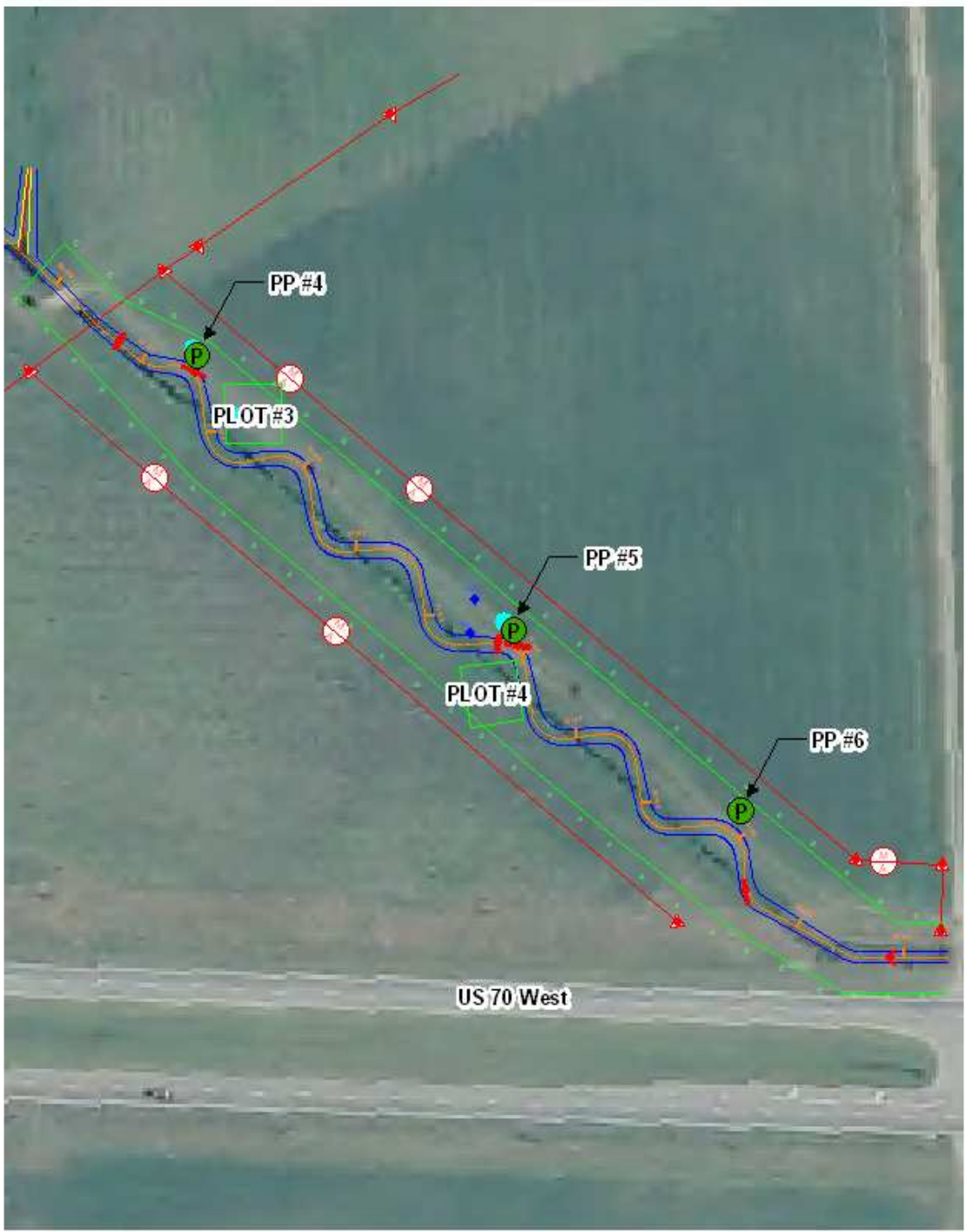
Overview photo looking downstream from US 70

Year 5 Summer – June 2016

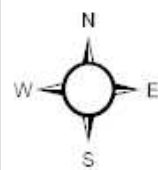
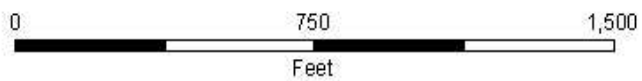


R-2719A UT to Falling Creek Stream Restoration Site  
Vegetation Plot & Photo Point Locations  
Lenoir County, North Carolina

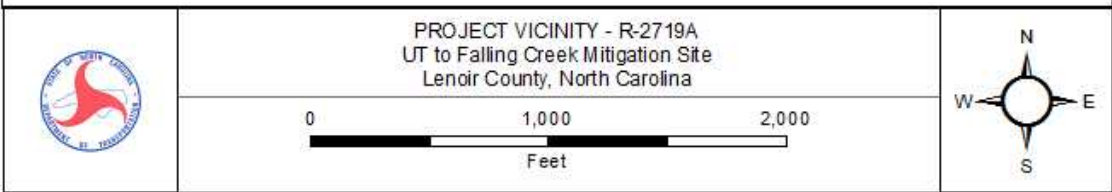




R-2719A UT to Falling Creek Stream Restoration Site  
Vegetation Plot & Photo Point Locations  
Lenoir County, North Carolina











# 2 ACRES STREAMBANK REFORESTATION

PROJECT NO. 24-02

DATE 10/20/02

BY H. P. P. P.

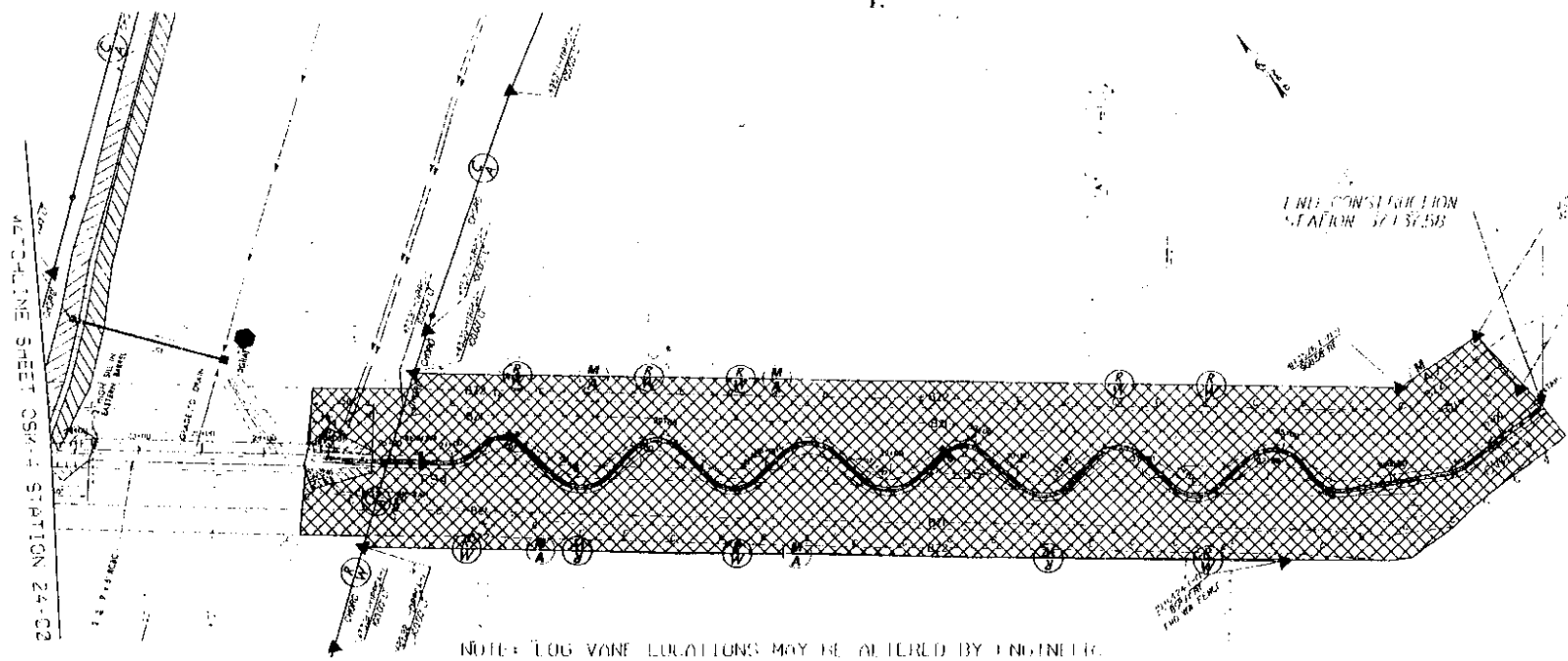
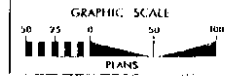
ROADWAY DESIGN ENGINEER

SHEET NO. 10

OF 10

BY H. P. P. P.

TRANSPORTATION ENGINEER



STREAMBANK REFORESTATION

SEE OSM-9, OSM-10 AND PROJECT SPECIAL PROVISIONS